

APPENDIX C

DELTA LEVEE SPECIAL IMPROVEMENT PROJECTS

DELTA LEVEE SYSTEM INTEGRITY PROGRAM

CALFED
Bay-Delta Program

DRAFT
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LEVEE SYSTEM INTEGRITY PROGRAM

LEVEE-IMPROVEMENT FUNDING DISCUSSION PAPER

INTRODUCTION

This discussion paper focuses on the special-projects funding program as discussed during Levee and Channel Technical Team meetings and the December 17, 1996 public workshop and gives a brief overview of the base-level funding and special levee-improvement-project funding programs.

The purpose of this discussion paper is to provide CALFED with a relational analysis of the benefits of flood control projects and associated maintenance activities for each Delta island included in the evaluation. Several benefit categories have been quantified, including, but not limited to, agricultural production, infrastructure, resident populations, and habitat conditions on each island. Information provided in this discussion paper will serve as input to decision-making processes and resource allocation measures for the Delta.

BASE-LEVEL FUNDING

Base-level funding (i.e., subventions funding) provides equitably distributed funding to participating local agencies in the Delta. Under this program, all local agencies (i.e., reclamation districts) will be eligible for the same base level of funding. The objectives of this program are to improve the reliability of Delta levee funding, improve cost sharing, provide funding for levee maintenance activities, use funds to implement a long-term levee standard for all levees, and fund emergency response activities. The recommended long-term levee standard is the Federal Public Law 84-99 (PL-99) standard, which provides 100-year-flood protection with 1.5 feet of freeboard and provides eligibility for postdisaster rehabilitation assistance.

The base-level funding program will be integrated into existing funding mechanisms. The passage of Proposition 204 in November 1996 activated Assembly Bill 360 (AB360), which amends the Delta Flood Protection Act of 1988 (Senate Bills 34 and 1065 [SB34 and SB1065]). Under the base-level funding program, the State would fully fund the SB34/AB360 program to realize a 75%/25% cost sharing between the State and local levee-maintenance agencies. All levees eligible for subventions funding under AB360 are nonproject levees in the Delta and project levees within the Delta primary zone. Under the proposed funding program, the State would guarantee a certain

base level of maintenance funding per levee-mile per year and would provide additional funding (currently undefined) to enable local districts to upgrade levees to PL-99 standards over time.

SPECIAL-PROJECTS FUNDING

The special-projects funding program sets priorities and establishes a funding mechanism for special habitat improvement and levee stabilization projects in the Delta. Special-projects funding is intended to augment the base-level funding program. Under the special-projects funding program, levee improvement projects would be funded based on public benefits. The objectives of the special-projects funding program are to improve cost sharing and funding for projects not funded under the base-level program; implement levee improvement projects based on public benefits; and implement projects recommended for subsidence control, levee-associated and inchannel habitat improvement, beneficial reuse of dredged material, seismic susceptibility improvements, and levee-associated recreation. Levee improvement projects would be identified and prioritized based on the public benefit accruing from island protection. Benefits include factors such as protection of water quality, conservation or enhancement of fish and wildlife habitat, and protection of public and private infrastructure.

Special-projects funding under AB360 is applicable to nonproject levees in the Delta, project levees in the primary zone, and 12 miles of Suisun Marsh levees. Similar to the base-level funding program, SB34/AB360 special-project funding will use a 75%/25% cost sharing between the State and local levee maintenance agencies.

Special-projects funding is based on the benefit to the public of a specific levee improvement project, not on the need for improvement. Determining the need for improvement may play a part in the timing of levee improvement funding, but is not the goal of special-projects funding. The idea is that base-level funding will adequately meet the 'needs' of the levee system and that special-projects funding will increase public benefits of the levee improvement program.

To determine which projects would most likely have priority for special-projects funding, the CALFED Levee and Channel Technical Team established a process for determining priorities based on public benefits. Although projects throughout the Bay-Delta would be eligible for special-projects funding, the Levee and Channel Technical Team looked at how special projects on different islands (or reclamation districts) would best meet the objectives for special-projects funding. This information-gathering process, referred to as the "island prioritization" process, is described below.

ISLAND PRIORITIZATION FOR SPECIAL PROJECTS

The first step in prioritizing islands based on benefits is to establish discrete objectives (e.g., protection of agricultural production) that can be used to rank the islands. The second step is to define the attributes of an island that are applicable to each objective (e.g., acres of agricultural lands, value of harvested crop), and the third step is to gather information on each island's attributes and rank the islands by objective.

The CALFED Levee and Channel Technical Team identified the following objectives for island prioritization:

- life and personal property,
- water quality,
- agricultural production,
- recreation,
- cultural resources,
- ecosystems,
- infrastructure of local concern,
- infrastructure of statewide concern, and
- adjacent island resources.

These objectives were based on discussions held at technical meetings between October and December 1996.

After determining objectives, the team identified attributes that could be used to evaluate an island's relative benefit under each objective. For example, acres of native vegetation, wetlands, and riparian habitats are some of the attributes used for ranking the relative ecosystem benefit of levee protection. The availability of data also directed the list of attributes; where data were not readily available, an alternative attribute was selected. Table 1 presents the attributes selected for each objective.

The California Department of Water Resources and Jones & Stokes Associates staff produced a matrix of information that presents attribute data for all reclamation districts within the lowlands of the legal Delta. The Levee and Channel Technical Team reviewed the data presented and recommended changes to data sources and attributes. The information matrix and detailed list of data sources are presented in Attachment 1. Staff used the best available data to develop the matrix, but it should be noted that the data is used to present relative values, not absolute values, for the reclamation districts. For example, the volume of each island is a function of the size and depth of the island. To give a relative value for volume, an estimate of acres approximately 0-20 feet below sea level was used. The Bay-Delta is a dynamic environment. Data presented in the information matrix will need to be updated to take into consideration changes in elevations over time caused by subsidence, changes in land uses and agricultural practices, and ongoing studies that may produce more accurate or thorough information.

DECISION PROCESS FOR SPECIAL PROJECTS

The objectives of the special-projects funding program may be prioritized to guide the allocation of funds for special projects. This process could involve weighting the objectives discussed above or establishing priorities for the timing of long-term fund allocation. The Levee and Channel Technical Team's role has been to gather information and present options for a decision-making body. The Bay Delta Advisory Council or a CALFED policy group will establish the priorities for special-projects funding.

Table 1. Special-Projects Funding Objectives and Attributes

Objective	Island Attribute
Life and Personal Property	Permanent population Towns Housing units Residential lands
Water Quality	Long-term salinity intrusion induced Critical to water quality as determined by SB34 Island volume
Agricultural Production	Total agricultural lands Value of damageable crops
Recreation	State or regional parks Recreation lands Recreation resorts
Cultural Resources	Known prehistoric sites Potential historic sites
Ecosystems	Native vegetation Wetlands Riparian habitats Agricultural waterfowl habitats Known special-status plant occurrences Known special-status wildlife occurrences
Infrastructure of Local Concern	County roads Commercial lands Industrial lands Acreage protected per levee mile
Infrastructure of Statewide Concern	Federal and State highways Water supply conveyance Railroad mainlines Natural gas pipelines Natural gas fields and storage Power transmission lines
Adjacent Island Resources	Adjacent levees at risk Seepage risk

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ATTACHMENT 1. INFORMATION MATRIX

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INTRODUCTION

The information matrix presents attribute data for the reclamation districts within the lowlands of the legal Delta (as defined by Section 12220 of the Water Code). The information matrix, an Excel spreadsheet, is organized by subject or objective. For each subject area, an introductory table lists the sources of information for the attribute data and includes comments on the data set or additional information pertinent to the subject area.

NOTES ON THE ISLANDS AND RECLAMATION DISTRICTS

The information matrix displays island names and reclamation districts with the lowlands of the legal Delta. Because Brannan/Andrus Island, Jones Tract, Roberts Island, and Tyler Island/Walnut Grove include more than one reclamation district, information is presented for each reclamation district wherever possible. Where information is available for the entire island only, the cumulative information for the island is presented under the complete island name (e.g., Jones Tract), and a "-" is included in the column for the individual reclamation districts (e.g., Lower Jones RD 2038).

Three islands do not have a reclamation district number. The Bethel Island reclamation district is the Bethel Island Municipal Improvement District. Shim Kee Tract and Rough & Ready Island levees are managed and maintained privately by the independent landowner.

Information for Winters Island is not complete for many attributes. A member of the Levee and Channel Technical Team recommended that Winter Island - RD2122, located south of Collinsville and immediately east of Browns Island, be included in the study area. The island has been included in the information spreadsheet but little attribute data has been compiled to complete the matrix information on this small west Delta island.

Instances where no data was available for an island or reclamation district are indicated by "N/D".

ISLAND ACREAGE AND LEVEE MILEAGE

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Island size	California Department of Water Resources. 1994. Land use mapping program. Sacramento, CA. (DWR Land use mapping data)
Length of project levees	California Department of Water Resources. 1993. Sacramento-San Joaquin Delta atlas. Sacramento, CA. (DWR Delta atlas)
Length of nonproject levees	DWR Delta atlas The data for levee lengths is taken from both the Delta Atlas and GIS coverage produced by Jones & Stokes Associates.

ISLAND	Reclamation District	Island Acres & Levee Miles		
		Island Size (Acres)	Flood-Control Levees, federal (Miles)	Flood-Control Levees, local (Miles)
Bacon Island	2028	5589	0	14.3
Bethel Island	-	3532	0	11.5
Bishop Tract	2042	2975	0	5.8
Boggs (Moss Tract)	404	3211	4	1.2
Bouldin Island	756	6020	0	18.0
Brack Tract	2033	4621	0	10.8
Bradford Island	2059	2183	0	7.4
Brannan/Andrus Island	-	15383	30.5	10.6
Andrus	317	3606		
Andrus, Isleton	407	1648		
Andrus, Upper	556	2351		
Brannan	2067	7778		
Byron Tract	800	6249	0	9.7
Canal Ranch	2086	3213	0	7.5
Coney Island	2117	998	0	5.4
Dead Horse Island	2111	225	0	2.6
Empire Tract	2029	3688	0	10.5
Fabian Tract	773	6725	0	18.8
Fay	2113	99	0	1.6
Glanville Tract	1002	6994	0	13.0
Grand Island	3	16892	29.0	0.0
Hastings Tract	2060	4519	16.0	0.0
Holland Tract	2025	4254	0	10.9
Holt Station	2116	197	0	0.4
Hotchkiss Tract	799	3621	0	6.3
Jersey Island	830	3571	0	15.6
Jones Tract	-			
Jones, Lower	2038	5743	0	8.8
Jones, Upper	2039	6501	0	9.3
King Island	2044	3256	0	9.0
Little Mandeville	2118	360	0	4.5
Mandeville Island	2027	5266	0	14.3
McCormack Williamson Tract	2110	2139	0	8.8
McDonald Island	2030	6058	0	13.7
Medford Island	2041	1205	0	5.9
Merritt Island	150	4901	18.1	0.0
Mildred Island	2021	1001	0	7.3
Naglee Burke	1007	5917	0	8.3
New Hope Tract	348	9798	0	18.6
Orwood Island	2024	2431	0	10.9
Palm Tract	2036	2505	0	7.5
Pescadero	2058	9004	6.7	2.2
Pierson District	551	9427	8.4	7.0
Prospect Island	1667	2275	2.9	7.1
Quimby Island	2090	809	0	7.0
Rindge Tract	2037	6840	0	15.7
Rio Blanco Tract	2114	959	0	4.0
Roberts Island	-	36189		
Roberts, Lower	684	10819	0.0	16.0
Roberts, Middle	524	12839	6.1	3.7
Roberts, Upper	544	8248	10.6	4.4
Rough and Ready Island	-	1461	0	6.7
Ryer Island	501	11955	20.6	0.0
Sargent Barnhart Tract	2074	1051	1.5	2.8
Sherman Island	341	11321	9.7	9.8
Shima Tract	2115	1848	0	6.6
Shin Kee Tract	-	960	0	3.9
Smith	1614	2163	6	2.8
Stark	2089	742	2.8	0.7
Staten Island	38	9229	0	25.4
Stewart Tract	2062	5364	12.3	0.0
Sutter Island	349	2619	12.5	0.0
Terminus	548	12187	0	16.1
Twitchell	1601	3648	2.5	9.3
Tyler Island	563	9453	12.2	10.7
Walnut Grove	554	459	1	1.2
Union Island	-	25016	1.0	29.2
Van Sickle Island	1607	2193	0	3.8
Veale Tract	2065	1499	0	5.7
Venice Island	2023	3159	0	12.3
Victoria Island	2040	7266	0	15.1
Webb Tract	2026	5507	0	12.8
Weber	828	1149	0	1.2
Winter Island	2122	482	0	4.8
Woodward Island	2072	1859	0	8.8
Wright-Elmwood Tract	2119	2134	0	6.8
-	307	6016.9	7.8	5.2
-	369	532.3	1	0.7
-	536	6389.7	14	0
-	765	1348.8	1.7	4
-	813	2537.5	2	6
-	900	10832.3	12	1.3
-	999	25775.7	27	5.8
-	1608	906.1	0	4
-	2084	3170.4	0	7
-	2093	5031.3	0	20.5
-	2095	5552.1	4	0
-	2098	6033.7	18.5	0
-	2121	527.9	0	2.3

LIFE AND PERSONAL PROPERTY

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Permanent population (1990)	DWR Delta atlas
Towns	DWR Delta atlas
Housing units	DWR Delta atlas
Residential lands	DWR Land use mapping data Residential lands include farmsteads (see Agricultural data). In some cases, residential lands = 0 yet housing units are shown (see for example, Victoria Island). This is probably because some housing units are located on lands that are not considered 'residential'. Specifically, agricultural farmworker housing is often located on lands categorized as "incidental agricultural lands" or a specific crop rather than farmsteads or residential lands.

Life and Property					
ISLAND	Reclamation District	Permanent	Towns	Housing Units	Residential
		Population (1990)			Lands (Acres)
Bacon Island	2028	260		39	35.7
Bethel Island	-	2115		1257	133.8
Bishop Tract	2042	52		23	16.6
Boggs (Moss Tract)	404	N/D		N/D	3.7
Bouldin Island	756	74		19	17.5
Brack Tract	2033	80		22	18.5
Bradford Island	2059	0		0	43.4
Brannan/Andrus Island	-	2093	-	1014	-
Andrus	317	-		-	167.6
Andrus, Isleton	407	-	Isleton	-	57.4
Andrus, Upper	556	-		-	36.0
Brannan	2067	-		-	38.9
Byron Tract	800	6336	Byron, Disco Bay	2964	12.2
Canal Ranch	2086	103		30	10.7
Coney Island	2117	0		0	2.8
Dead Horse Island	2111	39		23	0.0
Empire Tract	2029	5		3	10.8
Fabian Tract	773	130		28	45.9
Fay	2113	N/D		N/D	0.0
Glanville Tract	1002	N/D		N/D	24.6
Grand Island	3	1021	Ryde	411	193.8
Hastings Tract	2060	94	Hastings	22	17.6
Holland Tract	2025	35		28	14.1
Holt Station	2116	N/D		N/D	8.0
Hotchkiss Tract	799	847		373	122.8
Jersey Island	830	13		3	8.7
Jones Tract	-	-	-	-	-
Jones, Lower	2038	112		14	30.2
Jones, Upper	2039	46		8	57.0
King Island	2044	195		94	4.2
Little Mandeville	2118	N/D		N/D	0.0
Mandeville Island	2027	118		5	29.9
McCormack Williamson Tr	2110	0		0	2.5
McDonald Island	2030	95		0	73.2
Medford Island	2041	14		9	0.0
Merritt Island	150	238		97	68.7
Mildred Island	2021	0		0	0.0
Naglee Burke	1007	24		5	0.0
New Hope Tract	348	1376	Thornton	501	124.3
Orwood Island	2024	98		22	31.3
Palm Tract	2036	16		5	3.2
Pescadero	2058	54		19	164.2
Pierson District	551	355	Courtland	140	146.1
Prospect Island	1667	N/D		N/D	3.1
Quimby Island	2090	N/D		N/D	0.0
Rindge Tract	2037	33		29	31.6
Rio Blanco Tract	2114	10		5	7.4
Roberts Island	-	-	-	-	-
Roberts, Lower	684	221		88	113.6
Roberts, Middle	524	435		95	114.4
Roberts, Upper	544	231		75	91.2
Rough and Ready Island	-	174		43	0.0
Ryer Island	501	246		98	83.6
Sargent Barnhart Tract	2074	1902		806	0.0
Sherman Island	341	233		105	46.7
Shima Tract	2115	101		N/D	6.2
Shin Kee Tract	-	8		3	0.0
Smith	1614	N/D		N/D	0.0
Stark	2089	N/D		N/D	3.2
Staten Island	38	35		13	16.6
Stewart Tract	2062	213		104	29.5
Sutter Island	349	173		48	31.9
Terminus	548	602	Terminus	279	52.5
Twitchell	1601	87		41	15.4
Tyler Island	563	644		286	40.0
Walnut Grove	554	-	Walnut Grove	-	-
Union Island	1,2	779		144	151.6
Van Sickle Island	1607	0		0	0.0
Veale Tract	2065	4		2	0.0
Venice Island	2023	0		0	4.1
Victoria Island	2040	155		6	10.8
Webb Tract	2026	0		0	24.1
Weber	828	N/D		N/D	0.0
Winter Island	2122	0		N/D	0.0
Woodward Island	2072	6		1	4.6
Wright-Elmwood Tract	2119	31		0	20.3
-	307	N/D		N/D	33.9
-	369	N/D	Locke	N/D	4.1
-	536	N/D		N/D	53.9
-	765	N/D		N/D	5.5
-	813	N/D		N/D	15.4
-	900	N/D		N/D	130.7
-	999	303	Clarksburg	11652	375.6
-	1608	N/D		N/D	0.0
-	2084	N/D		N/D	0.0
-	2093	N/D		N/D	220.6
-	2095	N/D		N/D	43.5
-	2098	N/D		N/D	38.8
-	2121	N/D		N/D	2.9

AGRICULTURAL PRODUCTION

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Total agricultural lands	DWR Land use mapping data Includes grain and hay crops, field crops, truck and berry crops, pasture, rice, idle agricultural area, deciduous fruits and nuts, vineyards, and semiagricultural and incidental to agricultural area. Farmstead lands, shown here, are included in the "residential" land category.
Value of damageable crops	DWR Land use mapping data and California Department of Food and Agriculture. 1996. County Agriculture Commissioner's Reports for 1995. Sacramento, CA. Value is determined by crop acreages multiplied by the average values for each major agricultural classification. Crop values are based on 1995 production value information for Sacramento, San Joaquin, Contra Costa, Yolo, and Solano counties. In some instances, value of crops is \$0 although agricultural acres are shown. This is the result of those lands being categorized as idle, semiagricultural and incidental to agricultural, or farmsteads which are not included in the value of damageable crops analysis.

Agricultural Production														
Crop Acres and Values														
ISLAND	Reclamation District	Grain & Hay Crops (Acres)	Field Crops (Acres)	Truck & Berry Crops (Acres)	Pasture (Acres)	Rice (Acres)	Subtropical Fruits (Acres)	Deciduous Fruits & Nuts (Acres)	Vineyards (Acres)	Idle (Acres)	Semiagricultural & Incidental to Agriculture (Acres)	Farmsteads (Acres)	Semiagricultural & Incidental to Agriculture (Acres)	Total Value (\$1,000)
Bacon Island	2028	0.0	2148.9	2905.8	0.0	0.0	0.0	0.0	56.7	29.0	35.7	35.7	0.0	\$10,968
Bethel Island	-	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	2494.8	136.5	14.8	121.7	\$4
Bishop Tract	2042	523.6	293.9	191.8	1730.8	0.0	0.0	0.0	0.0	0.0	50.1	16.6	33.5	\$1,815
Boggs (Moss Tract)	404	0.0	0.0	0.0	78.1	0.0	0.0	0.0	0.0	0.0	152.3	3.7	148.6	\$37
Bouldin Island	756	1982.9	3393.1	0.0	0.0	0.0	0.0	0.0	0.0	4.1	17.5	17.5	0.0	\$2,826
Brack Tract	2033	607.2	2182.4	404.8	567.3	0.0	0.0	2.7	472.3	145.5	18.5	18.5	0.0	\$4,428
Bradford Island	2059	0.0	0.0	0.0	636.7	0.0	0.0	0.0	0.0	1286.2	8.6	8.5	0.1	\$308
Brannan/Andrus Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andrus	317	440.3	2741.1	0.0	0.0	0.0	0.0	0.0	0.0	34.1	1.6	1.6	0.0	\$1,900
Andrus, Isleton	407	406.9	713.7	0.0	0.0	0.0	0.0	122.7	20.6	3.4	8.8	8.8	0.0	\$964
Andrus, Upper	556	534.7	704.3	233.7	217.5	0.0	0.0	426.6	0.0	0.0	28.4	28.4	0.0	\$2,600
Brannan	2067	1528.4	5104.4	25.3	62.9	0.0	0.0	164.5	102.5	43.4	36.3	0.0	36.3	\$4,580
Byron Tract	800	802.9	731.0	1204.2	1103.9	0.0	0.0	0.0	0.0	119.9	12.2	12.2	0.0	\$3,176
Canal Ranch	2086	476.6	1891.8	419.8	167.1	0.0	0.0	0.0	34.7	0.0	10.7	10.7	0.0	\$2,904
Coney Island	2117	347.9	528.1	30.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	0.0	\$552
Dead Horse Island	2111	0.0	0.0	190.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$818
Empire Tract	2029	1343.9	1979.7	122.6	0.0	0.0	0.0	0.0	0.0	0.0	10.8	10.8	0.0	\$2,108
Fabian Tract	773	260.8	743.0	2972.9	2240.0	0.0	0.0	52.7	0.0	36.8	34.5	34.5	0.0	\$11,436
Fay	2113	0.0	63.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$41
Glanville Tract	1002	931.1	2346.5	534.9	2108.9	0.0	0.0	131.4	309.8	0.0	63.8	24.6	39.2	\$5,713
Grand Island	3	4576.2	6465.5	1820.4	1047.9	0.0	0.0	1903.1	0.0	0.0	177.7	174.1	3.6	\$17,015
Hastings Tract	2060	291.8	1584.3	517.1	1970.8	0.0	0.0	0.0	28.5	1388.6	21.4	17.6	3.8	\$7,844.9
Holland Tract	2025	2923.7	62.7	0.0	303.9	0.0	0.0	0.0	0.0	481.2	14.1	14.1	0.0	\$771.5
Holt Station	2116	96.5	17.1	0.0	18.7	0.0	0.0	0.0	0.0	37.3	8.0	8.0	0.0	\$52
Hotchkiss Tract	799	179.9	8.6	1.0	1709.4	0.0	0.0	54.7	0.0	476.4	60.5	32.9	27.6	\$1,031
Jersey Island	830	0.0	0.0	0.0	2803.0	0.0	0.0	0.0	0.0	16.2	8.7	8.7	0.0	\$1,345
Jones Tract	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jones, Lower	2038	1752.9	929.2	2566.7	0.0	0.0	0.0	0.0	0.0	266.2	30.2	30.2	0.0	\$9,521
Jones, Upper	2039	1103.5	3140.5	3688.4	1810.1	0.0	0.0	0.0	0.0	18.0	57.0	57.0	0.0	\$15,230
King Island	2044	1898.7	689.7	511.4	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2	0.0	\$2,727
Little Mandeville	2118	0.0	269.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$172
Mandeville Island	2027	400.3	2634.9	1015.2	5.8	0.0	31.8	1.1	464.0	46.8	28.6	28.5	0.1	\$6,422
McCormack Williamson Tr	2110	180.7	1271.5	275.9	0.0	0.0	0.0	0.0	0.0	65.9	2.5	2.5	0.0	\$1,770
McDonald Island	2030	911.8	1000.9	2389.8	559.4	0.0	0.0	0.0	0.0	533.8	73.2	73.2	0.0	\$8,977
Medford Island	2041	134.2	942.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$648
Merritt Island	150	839.2	845.1	776.9	547.3	0.0	0.0	380.1	1092.2	24.7	68.7	68.6	0.1	\$7,455
Mildred Island	2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
Naglee Burke	1007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
New Hope Tract	348	1846.1	3333.5	2050.2	390.2	0.0	0.0	279.9	1174.2	0.8	124.1	108.8	15.3	\$13,331
Orwood Island	2024	172.2	438.1	1146.8	381.2	0.0	0.0	31.9	0.0	33.2	142.5	114.4	28.1	\$14,282
Palm Tract	2036	1308.6	573.8	15.1	292.2	0.0	0.0	0.0	0.0	81.3	3.2	3.2	0.0	\$998
Pescadero	2058	118.4	1868.1	1778.7	3511.6	0.0	0.0	247.8	0.0	99.9	216.1	117.3	98.8	\$9,345
Pierson District	551	871.2	2535.6	0.0	332.1	0.0	0.0	1840.4	1002.2	312.1	146.1	146.1	0.0	\$9,480
Prospect Island	1667	388.9	489.2	226.9	0.0	0.0	0.0	0.0	0.0	7.4	3.1	3.1	0.0	\$1,178
Quimby Island	2030	303.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	295.4	0.0	0.0	0.0	\$98.6
Rio Blanco Tract	2037	710.9	4532.4	1024.6	19.3	0.0	0.0	0.0	0.0	132.4	31.6	31.6	0.0	\$6,475
Roberts Island	2114	351.1	126.1	0.0	326.4	0.0	0.0	0.0	0.0	0.0	7.4	7.4	0.0	\$353
Roberts, Lower	684	2839.2	2791.8	3134.8	1268.3	0.0	0.0	14.1	0.0	202.8	113.6	113.6	0.0	\$13,554
Roberts, Middle	524	1083.7	3675.9	2958.5	3902.6	0.0	0.0	31.9	0.0	33.2	142.5	114.4	28.1	\$14,282
Roberts, Upper	544	1712.9	2012.2	957.8	2882.8	0.0	0.0	228.0	121.8	20.2	91.2	91.2	0.0	\$7,262
Rough and Ready Island	-	357.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$118
Ryer Island	501	3252.4	3868.4	2122.4	1163.6	0.0	19.8	418.7	536.6	22.4	79.3	79.3	0.0	\$13,551
Sargent Barnhart Tract	2074	129.5	25.6	0.0	147.2	0.0	0.0	0.0	0.0	79.8	0.0	0.0	0.0	\$130
Sherman Island	341	1731.2	6581.4	462.5	379.6	0.0	0.0	0.0	0.0	645.6	46.7	46.7	0.0	\$6,469
Shima Tract	2115	263.9	178.0	266.2	783.9	0.0	0.0	208.8	0.0	8.1	6.2	6.2	0.0	\$1,985
Shin Kee Tract	-	283.6	321.6	147.9	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$866
Smith	1614	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.4	0.0	130.4	\$0
Stark	2089	129.8	209.7	0.9	308.1	0.0	0.0	0.0	0.0	0.0	3.2	3.2	0.0	\$328
Staten Island	38	3201.3	5196.6	336.8	0.0	18.2	0.0	0.0	0.0	0.0	16.6	16.6	0.0	\$5,494
Stewart Tract	2062	780.5	355.4	1288.3	2223.4	0.0	0.0	153.3	0.0	0.0	22.9	22.9	0.0	\$6,131
Sutter Island	349	180.4	453.8	284.3	166.9	0.0	12.6	1078.8	152.9	0.9	31.9	31.9	0.0	\$4,592
Terminous	353	3532.2	5618.9	331.4	1345.1	0.0	0.0	0.0	190.6	205.7	90.7	52.5	38.2	\$6,984
Twitcheil	1601	188.9	2567.1	242.2	319.9	0.0	0.0	0.0	0.0	24.7	15.4	15.4	0.0	\$2,646
Tyler Island	563	2671.7	4918.8	198.8	330.9	0.0	0.0	274.5	0.0	4.9	39.9	39.9	0.0	\$5,558
Walnut Grove	554	137.8	0.1	0.0	179.2	0.0	0.0	0.0	0.0	3.8	4.4	0.1	4.3	\$132
Union Island	-	1099.2	9100.7	5025.9	8372.9	0.0	0.0	512.9	0.0	45.8	151.6	151.6	0.0	\$21,874
Van Sickle Island	1607	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
Veale Tract	2065	926.2	0.0	0.0	73.7	0.0	0.0	0.0	0.0	311.5	0.0	0.0	0.0	\$341
Venice Island	2023	1145.4	1568.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	4.1	0.0	\$1,382
Victoria Island	2040	1316.9	933.9	3235.9	1400.9	0.0	0.0	0.0	0.0	0.0	10.8	10.8	0.0	\$12,221
Webb Tract	2026	1332.8	3461.6	0.0	0.0	0.0	0.0	0.0	0.0	45.9	24.1	24.1	0.0	\$2,655
Weber	828	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
Winter Island	2122	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0
Woodward Island	2072	898.1	0.0	748.6	0.0	0.0	0.0	0.0	0.0	40.1	4.6	4.6	0.0	\$2,729
Wright-Elmwood Tract	2119	1238.1	601.3	143.7	0.0	0.0	0.0	0.0	0.0	0.0	20.3	20.3	0.0	\$1,260
-	307	882.7	2315.3	1091.9	1049.0	0.0	18.8	21.0	201.9	23.1	33.9	33.9	0.0	\$6,458
-	369	0.0	0.0	0.0	59.3	0.0	0.0	89.2	0.0	0.6	4.2	4.1	0.1	\$260
-	536	476.6	1640.4	0.0	1159.7	0.0	0.0	0.0	0.0	1489.6	42.0	42.0	0.0	\$1,764
-	765	227.7	201.0	365.6	390.1	0.0	0.0	0.0	0.0	5.5	5.5	5.5	0.0	\$1,579
-	813	113.8	714.8	336.3	204.9	0.0	0.0	166.7	787.6	25.1	15.4	15.4	0.0	\$4,183
-	900	1183.8	2802.9	256.7	603.1	0.0	0.0	93.7	50.3	426.0	193.7	130.7	63.0	\$3,684
-	999	5976.1	8191.2	4199.2	4442.3	0.0	0.0	74.4	711.9	387.6	375.6	375.6	0.0	\$25,053
-	1608	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1	0.0	30.1	\$0
-	2084	3.5	1766.6	283.3	559.7	0.0	0.0	0.0	0.0	289.2	0.0	0.0	0.0	\$2,321
-	2093	2533.1	1230.1	264.5	0.0	0.0	0.0	0.0	0.0	24.9	220.6	220.6	0.0	\$2,483
-	2095	280.6	1413.5	1236.6	1832.5	0.0	0.0	36.7	0.0	39.3	62.5	31.4	31.1	\$5,991
-	2098	985.2	498.8	581.7	1801.8	0.0	0.0	0.0	0.0	666.9	53.0	38.8	14.2	\$3,400
-	2121	261.9	0.0	1.7	0.0	0.0	0.0	0.0	0.0					

WATER QUALITY

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Long-term salinity intrusion induced	Enright, Chris. n.d. Western Delta Island Flood Assumptions - DWRDSM Modeling Analysis. California Department of Water Resources, Delta Modeling Section. Sacramento, CA. Represents the long-term average change in salinity at Clifton Court Forebay based on DWR's Delta Simulation Model (DWRDSM) analysis.
Critical to water quality (SB-34)	California Water Code Section 12311(a) The Delta Flood Protection Act (SB-34) identified eight islands as critical to water quality.
Island volume	DWR Delta atlas and DWR Land use mapping data The island volume is used as an indicator of short-term water quality effects during specific hydrologic conditions in the Delta. An island breach would have a short-term, immediate effect on salinity intrusion only if the rate of filling of an island is greater than the outflow of water through the Delta. These elements are a function of the inflow of water into the Delta, the rate of water being exported out of the Delta, and the location and size of the breached island. Because most levee breaches occur during high inflows when outflow would exceed the rate of island filling, short-term effects on water quality (i.e., salinity) would seldom occur. However, the team felt it important to capture the possible of water quality effects of a levee breach during low inflow periods. Island volume estimates are derived from information on the "Land Surface Below Sea Level" and "Lowest surface Elevation" maps in the DWR Delta atlas. Weighted average surface elevations are multiplied by the island acreage (from DWR land use mapping data) to produce the estimated island volume.

ISLAND	Reclamation District	Water Quality		
		Salinity Intrusion	Critical to Water Quality SB 34	Island Volume (short-term water quality effects) (Acre Feet; estimate)
		Induced (% salinity increase @ Clifton Court)		
Bacon Island	2028		No	77700
Bethel Island	-		Yes	29600
Bishop Tract	2042		No	10400
Boggs (Moss Tract)	404		No	0
Bouldin Island	756	2%	No	83700
Brack Tract	2033		No	32900
Bradford Island	2059		Yes	25100
Brannan/Andrus Island	-	-5%	-	-
Andrus	317		No	52400
Andrus, Isleton	407		No	10700
Andrus, Upper	556		No	11800
Brannan	2067		No	117200
Byron Tract	800		No	37500
Canal Ranch	2086		No	19700
Coney Island	2117		No	5000
Dead Horse Island	2111		No	1100
Empire Tract	2029		No	50500
Fabian Tract	773		No	16800
Fay	2113		No	500
Glanville Tract	1002		No	0
Grand Island	3		No	110000
Hastings Tract	2060		No	5600
Holland Tract	2025	12%	Yes	38800
Holt Station	2116		No	1000
Hotchkiss Tract	799		Yes	10000
Jersey Island	830	40%	Yes	33500
Jones Tract	-		-	-
Jones, Lower	2038		No	45900
Jones, Upper	2039		No	71500
King Island	2044		No	30900
Little Mandeville	2118		No	1800
Mandeville Island	2027		No	76400
McCormack Williamson Tr	2110		No	2100
McDonald Island	2030	2%	No	83000
Medford Island	2041		No	15100
Merritt Island	150		No	0
Mildred Island	2021		No	0
Naglee Burke	1007		No	0
New Hope Tract	348		No	17100
Orwood Island	2024		No	21300
Palm Tract	2036		No	23800
Pescadero	2058		No	0
Pierson District	551		No	35400
Prospect Island	1667		No	8500
Quimby Island	2090		No	7100
Rindge Tract	2037		No	71800
Rio Blanco Tract	2114		No	2900
Roberts Island	-		-	-
Roberts, Lower	684		No	97400
Roberts, Middle	524		No	32100
Roberts, Upper	544		No	0
Rough and Ready Island	-		No	3700
Ryer Island	501		No	68700
Sargent Barnhart Tract	2074		No	3200
Sherman Island	341	41%	Yes	133600
Shima Tract	2115		No	9200
Shin Kee Tract	-		No	3800
Smith	1614		No	0
Stark	2089		No	3000
Staten Island	38	-4%	No	108400
Stewart Tract	2062		No	0
Sutter Island	349		No	10500
Terminus	548		No	102100
Twitchell	1601	19%	Yes	47900
Tyler Island	563		No	85600
Walnut Grove	554		No	2300
Union Island	1,2		No	103200
Van Sickle Island	1607		No	0
Veale Tract	2065		No	7500
Venice Island	2023		No	44700
Victoria Island	2040		No	74500
Webb Tract	2026	24%	Yes	80400
Weber	828		No	0
Winter Island	2122		No	0
Woodward Island	2072		No	21600
Wright-Elmwood Tract	2119		No	10700
-	307		No	0
-	369		No	2100
-	536		No	9600
-	765		No	0
-	813		No	0
-	900		No	0
-	999		No	6400
-	1608		No	3600
-	2084		No	15100
-	2093		No	8800
-	2095		No	0
-	2098		No	1500
-	2121		No	800
		0.41		133600

RECREATION

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
State or regional parks, wildlife areas, and easements	Parisi, Monica. Geographic information System specialist. California Department of Fish and Game, Sacramento, CA. January 2 and 3, 1997 - telephone conversations. These figures do not include parks and boating facilities external to the levee system.
Recreation lands	DWR Land use mapping data. 1993. Recreational lands include commercial lands related to recreational activities. There are many areas of the Delta that are used for private recreation (e.g., waterfowl hunting) but are not categorized as 'recreational' lands. We were unable to get island-specific data on private recreation lands and hunting clubs. Therefore, these figures most likely underestimate all the recreational resources in the area.
Recreation resorts	DWR Delta atlas and Schnell, Hal. n.d. San Joaquin River - Sacramento River California Delta boating map. Stockton, CA. Most of these 'resorts' are marinas and boating facilities external to the levee system.

ISLAND	Reclamation District	Recreation		
		State or		
		Regional	Recreation	
		Parks (Acres)	Lands (Acres)	Recreation Resorts
Bacon Island	2028	0	0.0	0
Bethel Island	-	0	6.4	19
Bishop Tract	2042	0	17.7	1
Boggs (Moss Tract)	404	0	0.0	2
Bouldin Island	756	0	0.0	0
Brack Tract	2033	359	0.0	0
Bradford Island	2059	0	0.0	0
Brannan/Andrus Island	-		0.0	24
Andrus	317	0	7.2	-
Andrus, Isleton	407	0	0.0	-
Andrus, Upper	556	0	5.2	-
Brannan	2067	0	93.4	-
Byron Tract	800	0	0.0	1
Canal Ranch	2086	0	0.0	0
Coney Island	2117	0	0.0	0
Dead Horse Island	2111	0	0.0	0
Empire Tract	2029	0	7.0	1
Fabian Tract	773	0	0.0	2
Fay	2113	0	0.0	0
Glanville Tract	1002	0	0.0	1
Grand Island	3	0	4.9	9
Hastings Tract	2060	0	0.0	0
Holland Tract	2025	0	0.0	2
Holt Station	2116	0	0.0	0
Hotchkiss Tract	799	0	0.0	18
Jersey Island	830	0	0.0	0
Jones Tract	-		0.0	-
Jones, Lower	2038	0	0.0	1
Jones, Upper	2039	0	0.0	1
King Island	2044	0	0.0	3
Little Mandeville	2118	0	0.0	0
Mandeville Island	2027	0	0.0	0
McCormack Williamson Tr	2110	0	0.0	0
McDonald Island	2030	0	0.0	0
Medford Island	2041	0	0.0	0
Merritt Island	150	0	0.0	1
Mildred Island	2021	0	0.0	0
Naglee Burke	1007	0	0.0	0
New Hope Tract	348	915	0.0	3
Orwood Island	2024	0	0.0	1
Palm Tract	2036	0	0.0	0
Pescadero	2058	0	9.3	0
Pierson District	551	0	0.0	3
Prospect Island	1667	0	0.0	1
Quimby Island	2090	0	0.0	0
Rindge Tract	2037	0	0.0	0
Rio Blanco Tract	2114	0	0.0	1
Roberts Island	-		-	-
Roberts, Lower	684	0	47.6	4
Roberts, Middle	524	0	0.0	0
Roberts, Upper	544	0	0.0	0
Rough and Ready Island	-	0	0.0	0
Ryer Island	501	0	17.0	2
Sargent Barnhart Tract	2074	0	32.5	3
Sherman Island	341	3100	66.7	7
Shima Tract	2115	0	0.0	0
Shin Kee Tract	-	0	0.0	2
Smith	1614	0	0.0	1
Stark	2089	0	0.0	0
Staten Island	38	0	0.0	0
Stewart Tract	2062	0	0.0	2
Sutter Island	349	0	0.0	1
Terminous	548	0	0.0	5
Twitchell	1601	0	0.0	1
Tyler Island	563	0	0.0	2
Walnut Grove	554	0	4.5	3
Union Island	1,2	0	0.0	0
Van Sickle Island	1607	0	0.0	0
Veale Tract	2065	0	0.0	0
Venice Island	2023	0	0.0	0
Victoria Island	2040	0	0.0	0
Webb Tract	2026	285	0.0	0
Weber	828	0	0.0	3
Winter Island	2122	0	0.0	0
Woodward Island	2072	0	0.0	0
Wright-Elmwood Tract	2119	0	0.0	1
-	307	0	0.0	1
-	369	0	0.0	0
-	536	0	0.0	0
-	765	0	0.0	N/D
-	813	0	0.0	0
-	900	0	0.0	2
-	999	0	0.0	1
-	1608	0	15.4	2
-	2084	0	0.0	1
-	2093	0	0.0	0
-	2095	0	0.0	0
-	2098	0	0.0	0
-	2121	0	0.0	0
			93.4	24
			0.0	

CULTURAL RESOURCES

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Known prehistoric sites	<p>U.S Bureau of Reclamation. 1996. Cultural resources of the Sacramento-San Joaquin Delta, CALFED Bay-Delta Program. Draft. Sacramento, CA.</p> <p>The information on prehistoric and historic resources in the Delta depends on whether an area has been surveyed and results have been reported. Therefore, the lack of an occurrence on an island does not preclude the presence of prehistoric and historic resources.</p>
Potential historic sites	<p>U.S Bureau of Reclamation. 1996. Cultural resources of the Sacramento-San Joaquin Delta, CALFED Bay-Delta Program. Draft. Sacramento, CA.</p> <p>See above note.</p>

		Cultural Resources	
		Known Prehistoric Sites	Potential Historic Sites
ISLAND	Reclamation District		
Bacon Island	2028		13
Bethel Island	-	4	
Bishop Tract	2042	1	
Boggs (Moss Tract)	404	1	
Bouldin Island	756		6
Brack Tract	2033		
Bradford Island	2059		
Brannan/Andrus Island	-		
Andrus	317		
Andrus, Isleton	407		
Andrus, Upper	556	1	
Brannan	2067		
Byron Tract	800	5	1
Canal Ranch	2086		
Coney Island	2117		
Dead Horse Island	2111		
Empire Tract	2029		
Fabian Tract	773	3	2
Fay	2113		
Glanville Tract	1002	2	
Grand Island	3		
Hastings Tract	2060		
Holland Tract	2025	4	2
Holt Station	2116		
Hotchkiss Tract	799	8	
Jersey Island	830	1	
Jones Tract	-		
Jones, Lower	2038		
Jones, Upper	2039		
King Island	2044		
Little Mandeville	2118		
Mandeville Island	2027		
McCormack Williamson Tr	2110		
McDonald Island	2030	1	
Medford Island	2041		
Merritt Island	150	2	
Mildred Island	2021		
Naglee Burke	1007		
New Hope Tract	348	24	2
Orwood Island	2024		
Palm Tract	2036	1	
Pescadero	2058	2	1
Pierson District	551	3	
Prospect Island	1667		
Quimby Island	2090		
Rindge Tract	2037		
Rio Blanco Tract	2114		
Roberts Island	-	-	
Roberts, Lower	684		
Roberts, Middle	524	1	
Roberts, Upper	544		
Rough and Ready Island	-		
Ryer Island	501		
Sargent Barnhart Tract	2074	1	1
Sherman Island	341		
Shima Tract	2115		
Shin Kee Tract	-		
Smith	1614		
Stark	2089		
Staten Island	38		1
Stewart Tract	2062		
Sutter Island	349		
Terminous	548	1	
Twitchell	1601		
Tyler Island	563	4	
Walnut Grove	554	-	
Union Island	1,2	1	
Van Sickle Island	1607		
Veale Tract	2065	2	
Venice Island	2023		
Victoria Island	2040		
Webb Tract	2026		2
Weber	828	1	
Winter Island	2122		
Woodward Island	2072		1
Wright-Elmwood Tract	2119		
-	307	5	1
-	369	4	
-	536		
-	765		
-	813	4	
-	900		
-	999	5	
-	1608		
-	2084		
-	2093		
-	2095	1	
-	2098		
-	2121		

INFRASTRUCTURE OF LOCAL CONCERN

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
County roads	DWR Delta atlas. The team selected "present/absent" as the appropriate unit to report over "miles of roadway" because if any portion of a road is damaged or inundated during a levee breach or flood event, circulation patterns would need to be re-routed.
Commercial lands	DWR Land use mapping data.
Industrial lands	DWR Land use mapping data.
Acreage protected per levee mile	DWR Delta atlas and DWR Land use mapping data. Acreage protected per levee mile was computed by dividing each island's acreage by the corresponding number of levee miles.

Infrastructure of Local Concern					
ISLAND	Reclamation District	County Roads	Commercial Lands (Acres)	Industrial Lands (Acres)	Acreage
					Protected
					per Levee Mile (Acres/Mile)
Bacon Island	2028	present	0.0	13.8	393
Bethel Island	-	present	0.0	0.0	304
Bishop Tract	2042	present	0.0	0.0	374
Boggs (Moss Tract)	404	absent	31.5	42.0	617
Bouldin Island	756	absent	0.0	45.3	334
Brack Tract	2033	present	0.0	0.0	451
Bradford Island	2059	absent	0.0	0.0	277
Brannan/Andrus Islan	-	-	-	-	376
Andrus	317	present	0.0	5.3	-
Andrus, Isleton	407	present	3.8	46.7	-
Andrus, Upper	556	present	0.0	1.8	-
Brannan	2067	present	2.4	9.8	-
Byron Tract	800	present	0.0	0.0	715
Canal Ranch	2086	absent	0.0	0.0	399
Coney Island	2117	absent	0.0	0.0	173
Dead Horse Island	2111	absent	0.0	0.0	81
Empire Tract	2029	present	0.0	0.0	327
Fabian Tract	773	present	0.0	0.0	347
Fay	2113	absent	0.0	0.0	63
Glanville Tract	1002	present	0.0	0.0	538
Grand Island	3	present	5.8	5.3	587
Hastings Tract	2060	absent	0.0	0.0	447
Holland Tract	2025	present	0.0	0.0	372
Holt Station	2116	present	0.0	0.0	490
Hotchkiss Tract	799	present	17.3	9.9	492
Jersey Island	830	present	0.0	0.0	223
Jones Tract	-	-	-	-	-
Jones, Lower	2038	present	0.0	0.0	670
Jones, Upper	2039	present	0.0	0.0	673
King Island	2044	present	0.0	0.0	362
Little Mandeville	2118	absent	0.0	0.0	80
Mandeville Island	2027	absent	0.0	0.0	371
McCormack Williamso	2110	absent	0.0	3.0	188
McDonald Island	2030	absent	0.0	84.0	449
Medford Island	2041	absent	0.0	0.0	207
Merritt Island	150	present	0.0	3.3	262
Mildred Island	2021	absent	0.0	0.0	137
Naglee Burke	1007	present	0.0	0.0	734
New Hope Tract	348	present	18.8	26.0	500
Orwood Island	2024	present	0.0	0.0	380
Palm Tract	2036	absent	0.0	0.0	325
Pescadero	2058	present	3.1	138.4	955
Pierson District	551	present	0.0	16.4	612
Prospect Island	1667	absent	0.0	0.0	123
Quimby Island	2090	absent	0.0	0.0	110
Rindge Tract	2037	absent	0.0	0.0	435
Rio Blanco Tract	2114	absent	0.0	0.0	176
Roberts Island	-	-	-	-	-
Roberts, Lower	684	present	5.5	53.5	676
Roberts, Middle	524	present	0.0	672.2	1310
Roberts, Upper	544	present	0.0	0.0	550
Rough and Ready Isla	-	absent	0.0	835.7	218
Ryer Island	501	present	0.0	0.0	577
Sargent Barnhart Trac	2074	present	0.0	0.0	282
Sherman Island	341	present	7.1	0.0	510
Shima Tract	2115	absent	0.0	0.0	363
Shin Kee Tract	-	absent	0.0	0.0	246
Smith	1614	present	0.0	0.0	246
Stark	2089	absent	0.0	0.0	210
Staten Island	38	present	0.0	9.4	361
Stewart Tract	2062	present	0.0	0.0	318
Sutter Island	349	present	0.0	0.0	210
Terminus	548	present	0.0	0.0	650
Twitchell	1601	present	0.0	10.1	298
Tyler Island	563	present	0.0	3.0	375
Walnut Grove	554	present	0.0	25.3	208
Union Island	1,2	present	10.1	0.0	735
Van Sickle Island	1607	absent	0.0	0.0	278
Veale Tract	2065	present	0.0	4.0	228
Venice Island	2023	absent	0.0	0.0	262
Victoria Island	2040	absent	0.0	0.0	480
Webb Tract	2026	absent	0.0	0.0	429
Weber	828	absent	0.0	0.0	958
Winter Island	2122	absent	0.0	0.0	100
Woodward Island	2072	absent	0.0	0.0	207
Wright-Elmwood Tract	2119	present	0.0	0.0	312
-	307	present	0.0	1.7	463
-	369	present	0.0	0.0	313
-	536	present	0.0	0.0	456
-	765	present	0.0	0.0	237
-	813	present	0.0	0.0	317
-	900	present	0.0	0.0	814
-	999	present	0.0	105.2	786
-	1608	absent	0.0	39.8	302
-	2084	present	0.0	51.1	453
-	2093	absent	0.0	0.0	245
-	2095	present	147.8	55.6	1388
-	2098	absent	0.0	0.0	326
-	2121	present	0.0	0.0	229
			147.844	835.6962	1388

INFRASTRUCTURE OF STATEWIDE CONCERN

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Federal and state highways	DWR Delta atlas. See note for "County Roads" above.
Water supply conveyance	DWR Delta atlas.
Railroad mainlines	DWR Delta atlas.
Natural gas pipelines	Warner, Chris. Supervisor of mapping. Pacific Gas and Electric, Central Area, Walnut Creek, CA. November 25 and December 7, 1996; January 2,3 and 17, 1997 - telephone conversations and facsimile. (PG&E natural gas facilities data) Gas distribution line mileages are approximate.
Natural gas fields and storage	DWR Delta atlas and PG&E natural gas facilities data.
Power transmission lines	DWR Delta atlas.

		Statewide Infrastructure					
			Water				Power
		Federal and	Supply	Railroad	Natural Gas	Natural Gas	Transmission
	Reclamation	State	Conveyance	Mainlines	Fields and	Pipelines	Lines
ISLAND	District	Highways	(Miles)	(Miles)	Storage	(Miles)	(Miles)
Bacon Island	2028	absent	0	0	Absent	4.32	0
Bethel Island	-	absent	0	0	Production	1.29	0
Bishop Tract	2042	present	0	0	Absent	0	2
Boggs (Moss Tract)	404	present	0	3	Production	na	1
Bouldin Island	756	present	0	0	Absent	0	0
Brack Tract	2033	absent	0	0	Absent	10.03	0
Bradford Island	2059	absent	0	0	Production	5.43	0
Brannan/Andrus Island	-	-	-	-	-	-	-
Andrus	317	present	0	0	Production	15.34	0
Andrus, Isleton	407	present	0	0	Production	na	0
Andrus, Upper	556	absent	0	0	Production	na	0
Brannan	2067	present	0	0	Production	49.26	6
Byron Tract	800	present	0	1	Absent	1.85	2
Canal Ranch	2086	absent	0	0	Absent	0.89	0
Coney Island	2117	absent	0	0	Absent	0	0
Dead Horse Island	2111	absent	0	0	Absent	0	0
Empire Tract	2029	absent	0	0	Absent	0	0
Fabian Tract	773	absent	0	0	Absent	0	0
Fay	2113	absent	0	0	Absent	0	0
Glanville Tract	1002	present	0	0	Absent	0	0
Grand Island	3	present	0	0	Production	6.06	9
Hastings Tract	2060	absent	3.4	0	Production	3.91	2
Holland Tract	2025	absent	0	0	Absent	0	0
Holt Station	2116	present	0.2	0	Absent	na	0
Hotchkiss Tract	799	absent	1.7	0	Production	9.2	3
Jersey Island	830	absent	0	0	Production	4.89	3
Jones Tract	-	-	-	-	-	-	-
Jones, Lower	2038	absent	5.5	5	Absent	0	0
Jones, Upper	2039	present	5.5	0	Absent	0	4
King Island	2044	absent	0	0	Production	0.61	0
Little Mandeville	2118	absent	0	0	Absent	na	0
Mandeville Island	2027	absent	0	0	Absent	0	0
McCormack Williamson Tr	2110	absent	0	0	Present	na	0
McDonald Island	2030	absent	0	0	STORAGE	9.27	0
Medford Island	2041	absent	0	0	Absent	0	0
Merritt Island	150	absent	0	0	Production	0	0
Mildred Island	2021	absent	0	0	Absent	2.53	0
Naglee Burke	1007	absent	0	0	Absent	na	3
New Hope Tract	348	present	0	2	Production	16.46	0
Orwood Island	2024	absent	2.6	0	Absent	1.15	0
Palm Tract	2036	absent	0	2	Absent	5.24	0
Pescadero	2058	present	0	4	Absent	0	0
Pierson District	551	present	0.8	0	Production	0.05	4
Prospect Island	1667	absent	0	0	Absent	0	0
Quimby Island	2090	absent	0	0	Absent	0	0
Rindge Tract	2037	absent	0	0	Absent	0	0
Rio Blanco Tract	2114	absent	0	0	Production	0	1
Roberts Island	-	-	-	-	-	15.34	-
Roberts, Lower	684	absent	3	5	Production	-	3
Roberts, Middle	524	present	0	0	Production	-	1
Roberts, Upper	544	absent	0	0	Production	-	4
Rough and Ready Island	-	absent	0	0	Absent	0	0
Ryer Island	501	present	0	0	Absent	0	0
Sargent Barnhart Tract	2074	absent	1.5	0	Absent	0	0
Sherman Island	341	present	0	0	Production	40.72	13
Shima Tract	2115	absent	0	0	Absent	0	1
Shin Kee Tract	-	present	0	0	Absent	0.97	1
Smith	1614	present	0	0	Absent	na	0
Stark	2089	absent	0	0	Absent	0	1
Staten Island	38	absent	0	0	Production	4.15	0
Stewart Tract	2062	present	0	3	Absent	0	1
Sutter Island	349	absent	0	0	Absent	0	0
Terminus	548	present	0	0	Production	7.56	3
Twitchell	1601	absent	0	0	Production	8.89	0
Tyler Island	563	absent	0.8	0	Production	19.09	0
Walnut Grove	554	absent	0.7	0	Production	-	-
Union Island	1,2	absent	0	0	Production	12.53	6
Van Sickle Island	1607	absent	0	0	Absent	0	0
Veale Tract	2065	absent	0	0	Absent	1.02	1
Venice Island	2023	absent	0	0	Absent	0	0
Victoria Island	2040	prcsont	0	0	Absent	0	0
Webb Tract	2026	absent	0	0	Production	0.02	0
Weber	828	present	0	0	Production	N/D	0
Winter Island	2122	absent	0	0	Absent	N/D	0
Woodward Island	2072	absent	1.5	0	Absent	0	0
Wright-Elmwood Tract	2119	absent	0	0	Absent	0	2
-	307	absent	0	0	N/D	N/D	3
-	369	absent	0	0	Production	N/D	0
-	536	absent	0	0	Production	N/D	2
-	765	present	0	0	N/D	N/D	0
-	813	present	0	0	Absent	N/D	2
-	900	present	0	0	N/D	N/D	0
-	999	present	0	0	Absent	N/D	1
-	1608	present	0	0	Absent	N/D	0
-	2084	absent	0	0	Production	N/D	0
-	2093	absent	0	0	Production	N/D	0
-	2095	present	0	2.7	Absent	N/D	3
-	2098	absent	0	0	Production	N/D	3
-	2121	absent	0	1	Absent	N/D	0
			5.5	5.3		49.26	12.9

ADJACENT ISLAND RESOURCES

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Adjacent levees at risk	**
Adjacent acreage at risk	**
Seepage risk	**

Adjacent island resources are an important element to the Delta levee system integrity program. This objective has been included in the Special Projects prioritization process to recognize the relationships between a breached island and adjacent islands. The main factors that the team wants to capture in the information matrix include wind and wave erosion and seepage. Waterside levee slopes are subject to varying erosional effects of channel flows, tidal action, wind-generated waves, and boat wakes. A levee breach can result in increased wave action over time because the wind fetch across open water results in bigger waves which can affect erosion of an adjacent island's exterior levee slopes. Seepage of water from waterways or adjacent islands is a major concern of Delta land users. Seepage from these sources can affect levee erosion problems or instability and create drainage problems for landowners. The amount of seepage that occurs is controlled by the permeability of soils, length of the seepage path, and height of the hydraulic head (i.e., the pressure created by water within a given volume). A flooded island would result in potential increases in seepage to adjacent islands.

In discussing how to capture these issues, the team recommended using the attributes listed above. However, detailed assumptions needed to characterize these attributes have not yet been worked out. For example, what is an appropriate distance between levees to define "adjacent"? How can the seepage risk attribute capture differences in soil and current seepage conditions throughout the Delta? and How should the seepage risk attribute be characterized (e.g., a qualitative or quantitative scale). Additional investigation and discussion is needed to fully develop the "Adjacent Island Resources" attributes. Therefore, data will be presented in a future version of the information matrix.

ISLAND	Reclamation District	Adjacent Islands		
		Adjacent Levees	Adjacent Acreage	Seepage Risk
		At Risk (Miles)	At Risk (Acres)	
Bacon Island	2028		19512	
Bethel Island	-		10631	
Bishop Tract	2042		13193	
Boggs (Moss Tract)	404			
Bouldin Island	756		50326	
Brack Tract	2033		22639	
Bradford Island	2059		22414	
Brannan/Andrus Island	-		50542	
Andrus	317		-	
Andrus, Isleton	407		-	
Andrus, Upper	556		-	
Brannan	2067		-	
Byron Tract	800		13210	
Canal Ranch	2086		23346	
Coney Island	2117		29452	
Dead Horse Island	2111		28710	
Empire Tract	2029		29790	
Fabian Tract	773		36972	
Fay	2113		8061	
Glanville Tract	1002		10634	
Grand Island	3		38930	
Hastings Tract	2060		0	
Holland Tract	2025		16728	
Holt Station	2116			
Hotchkiss Tract	799		12329	
Jersey Island	830		18588	
Jones Tract	-		-	
Jones, Lower	2038		52398	
Jones, Upper	2039		41619	
King Island	2044		24624	
Little Mandeville	2118			
Mandeville Island	2027		22468	
McCormack Williamson Tr	2110		34664	
McDonald Island	2030		51794	
Medford Island	2041		18095	
Merritt Island	150		11600	
Mildred Island	2021			
Naglee Burke	1007		15210	
New Hope Tract	348		13823	
Orwood Island	2024		11191	
Palm Tract	2036		15121	
Pescadero	2058		12590	
Pierson District	551		31370	
Prospect Island	1667		11880	
Quimby Island	2090		9360	
Rindge Tract	2037		52066	
Rio Blanco Tract	2114		6445	
Roberts Island	-		56009	
Roberts, Lower	684		-	
Roberts, Middle	524		-	
Roberts, Upper	544		-	
Rough and Ready Island	-		33761	
Ryer Island	501		20858	
Sargent Barnhart Tract	2074		36098	
Sherman Island	341		25118	
Shima Tract	2115		11124	
Shin Kee Tract	-		14435	
Smith	1614			
Stark	2089		34792	
Staten Island	38		42439	
Stewart Tract	2062		64163	
Sutter Island	349		42610	
Terminous	548		27758	
Twitchell	1601		32928	
Tyler Island	563		58484	
Walnut Grove	554		-	
Union Island	1,2		51906	
Van Sickle Island	1607			
Veale Tract	2065		9596	
Venice Island	2023		21445	
Victoria Island	2040		38151	
Webb Tract	2026		35543	
Weber	828			
Winter Island	2122			
Woodward Island	2072		36099	
Wright-Elmwood Tract	2119		42989	
-	307			
-	369			
-	536			
-	765			
-	813			
-	900			
-	999			
-	1608			
-	2084			
-	2093			
-	2095			
-	2098			
-	2121			
			64163	

ECOSYSTEM

ISLAND ATTRIBUTE	DATA SOURCE and NOTES
Native vegetation	DWR Land use mapping data. 1993.
Wetlands	U.S. Fish and Wildlife Service. 1995. National Wetland Inventory based on 1985 aerial photographs mapped at 1:124,000 scale. (NWI mapping data)
Riparian habitats	NWI mapping data
Agricultural waterfowl habitats	DWR Land use mapping data. 1993. Agricultural land classifications considered potential waterfowl habitat are grain and hay crops (barley, wheat, oats, miscellaneous and mixed hay and grain); field crops (safflower, flax, hops, sugar beets, corn [field or sweet], grain sorghum); and rice.
Known special-status plant occurrences	Natural Diversity Database. 1996. Records search for the Bay-Delta study area. California Department of Fish and Game. Sacramento, CA. (NDDB) California Department of Fish and Game. 1995. SB 34 Delta Levees Master Environmental Assessment. Sacramento, CA. (SB 34 MEA) Data for the "Habitat and Special-Status Species Interior to Levee Systems" category was compiled from the Natural Diversity Database and California Department of Fish and Game's SB 34 Delta Levees Master Environmental Assessment. Species locations were reconciled (cross-referenced) in order to eliminate duplicative data. The information on special-status plant and wildlife occurrences in the Delta depends on whether an area has been surveyed and results have been reported. Therefore, the lack of an occurrence on an island does not preclude the presence of special-status plants and wildlife.
Known special-status wildlife occurrences	NDDB and SB 34 MEA See above notes.

Ecosystem attribute data (acres and species occurrences) have been presented in three ways: totals for each island, resources interior to the levee system, and resources on the exterior (water side) of the island levees. The attribute data are divided this way to distinguish those resources that are protected by the existing levee system (interior to the levee system) and those resources exterior to the system. This distinction was used in ranking the islands for the Special Projects prioritization exercise.

ISLAND	Reclamation District	Island Total							
		Native Vegetation (Acres)	Wetlands (Acres)	Riparian Habitats (Acres)	Agricultural Waterfowl Habitats (Acres)	Known Special-Status Plant		Known Special-Status Wildlife	
						Occurrences (by 1995)		Occurrences (by 1995)	
						# species	# occurrences	# species	# occurrences
Bacon Island	2028	360.3	0.0	7.2	1112.7	4	48	3	9
Bethel Island	-	344.7	2.4	90.9	0	4	19	1	1
Bishop Tract	2042	103.1	7.6	1.7	817.5	1	1	1	1
Boggs (Moss Tract)	404	193.5	3.4	62.5	0.0				
Bouldin Island	756	217.4	0.3	5.3	5348.9	5	46	4	5
Brack Tract	2033	196.0	8.3	0.0	1263.7	2	7	3	15
Bradford Island	2059	171.1	0.0	14.8	0.0	2	5		
Brannan/Andrus Island	-	-	-	-	-	6	46	3	7
Andrus	317	136.0	7.7	5.6	2723.4	-	-	-	-
Andrus, Isleton	407	138.6	24.1	0.0	947.7	-	-	-	-
Andrus, Upper	556	157.1	0.0	1.7	873.3	-	-	-	-
Brannan	2067	475.5	26.5	15.6	4691.5	-	-	-	-
Byron Tract	800	874.3	54.9	0.6	1280.8	7	17	2	5
Canal Ranch	2086	179.4	18.5	0.0	2255.8	4	9	2	8
Coney Island	2117	84.4	2.5	1.6	658.1	2	8	1	3
Dead Horse Island	2111	28.8	0.0	0.0	0.0	1	5	1	1
Empire Tract	2029	176.6	18.2	14.7	2159.9	4	15	2	2
Fabian Tract	773	339.6	13.0	38.6	1003.8	2	9	3	10
Fay	2113	31.4	0.0	2.7	63.9	2	5	1	1
Glanville Tract	1002	298.5	100.9	39.6	1212.1	4	9	3	3
Grand Island	3	666.6	37.3	28.8	7901.0			1	2
Hastings Tract	2060	385.0	82.2	0.0	503.3	2	3		
Holland Tract	2025	384.0	15.8	31.0	2923.7	4	39	2	2
Holt Station	2116	2.9	0.9	0.0	113.6				
Hotchkiss Tract	799	746.5	4.7	44.5	185.4	2	11	2	2
Jersey Island	830	697.5	16.8	58.3	0.0				
Jones Tract	-	-	-	-	-	-	-	-	-
Jones, Lower	2038	167.6	0.0	1.1	2458.4	4	14	2	3
Jones, Upper	2039	406.1	5.5	0.0	2447.7	4	15	3	4
King Island	2044	115.0	0.0	0.0	2819.3				
Little Mandeville	2118	50.3	0.0	7.6	269.2				
Mandeville Island	2027	336.1	85.7	41.9	501.6	3	20	1	1
McCormack Williamson Tr	2110	66.7	0.0	8.5	180.7	4	18	1	5
McDonald Island	2030	395.2	76.8	14.2	1537.6	4	16	2	2
Medford Island	2041	84.7	3.2	17.4	328.8	2	4	3	3
Merritt Island	150	238.5	0.0	1.0	1007.5			1	2
Mildred Island	2021	151.9	0.0	0.0	-	1	1		
Naglee Burke	1007	0.0	0.0	0.0	-			1	1
New Hope Tract	348	303.0	54.5	4.7	3905.7	1	12	4	17
Orwood Island	2024	212.3	0.0	4.7	596.2	2	4		
Palm Tract	2036	205.6	0.6	0.0	1882.4	3	17	2	5
Pescadero	2058	304.9	10.5	24.2	873.4			2	6
Pierson District	551	277.7	64.4	24.7	2012.2	2	6	3	5
Prospect Island	1667	418.4	3.3	3.4	389.0	2	3		
Quimby Island	2090	139.4	0.0	14.2	303.2	4	7		
Rindge Tract	2037	347.3	0.0	0.6	3075.4	3	26	1	1
Rio Blanco Tract	2114	94.5	17.1	14.4	422.4			1	1
Roberts Island	-	-	-	-	-	3	9	4	23
Roberts, Lower	684	303.8	26.7	10.0	4947.3	-	-	-	-
Roberts, Middle	524	177.3	8.8	24.8	4569.8	-	-	-	-
Roberts, Upper	544	207.1	9.9	7.4	3141.5	-	-	-	-
Rough and Ready Island	-	233.9	84.6	118.7	358.0	1	2		
Ryer Island	501	317.8	6.0	12.3	6178.8				
Sargent Barnhart Tract	2074	41.6	4.3	9.3	155.1	1	1		
Sherman Island	341	381.9	40.6	2.4	1772.4	5	65	5	6
Shima Tract	2115	103.1	0.0	0.0	442.0	2	3	1	2
Shin Kee Tract	-	26.7	0.2	0.0	605.2	1	1	2	2
Smith	1614	24.3	0.0	38.3	0.0				
Stark	2089	85.9	9.4	6.8	339.5	1	2	2	4
Staten Island	38	250.1	0.0	2.4	8397.9	7	26	3	11
Stewart Tract	2062	233.9	42.9	17.2	1115.9				
Sutter Island	349	223.5	0.0	0.0	494.1				
Terminus	548	648.0	181.5	4.4	7859.6	5	19	4	8
Twitchell	1601	236.7	0.0	4.6	632.1	4	5		
Tyler Island	563	403.8	10.2	1.4	5599.8	3	4	3	5
Walnut Grove	554	23.8	0.0	0.0	137.8	-	-	-	-
Union Island	1,2	645.0	8.9	46.7	8391.0	4	29	4	11
Van Sickle Island	1607	0.0	0.0	0.0	0.0	4	14	1	1
Veale Tract	2065	161.1	5.2	0.0	926.2				
Venice Island	2023	265.0	3.2	66.9	1211.9	3	7	1	1
Victoria Island	2040	265.6	1.7	0.0	2097.6	4	34	1	3
Webb Tract	2026	400.6	78.7	92.9	1332.8	5	33		
Weber	828	0.0	0.0	3.9	898.1				
Winter Island	2122	N/D	N/D	N/D	0.0				
Woodward Island	2072	143.0	0.1	0.0	0.0	2	22	3	4
Wright-Elmwood Tract	2119	122.9	0.1	7.7	0.0	1	1		
-	307	199.7	10.9	6.0	1264.7				
-	369	73.9	156.8	139.5	0.0				
-	536	1179.4	78.9	0.3	807.6				
-	765	96.2	4.8	11.2	428.8				
-	813	90.9	9.3	1.7	405.9				
-	900	687.7	70.7	21.8	1740.2				
-	999	852.5	33.6	23.3	8779.4				
-	1608	0.0	0.1	0.0	0.0				
-	2084	205.4	1.1	5.7	1005.6				
-	2093	240.8	39.6	12.5	3087.3				
-	2095	228.9	69.7	74.9	1111.8				
-	2098	1265.8	857.0	5.8	1350.4				
-	2121	10.3	45.6	0.4	261.9				

ISLAND	Reclamation District	Interior to Levee						
		Native Vegetation (Acres)	Wetlands (Acres)	Riparian Habitats (Acres)	Known Special-Status Plant		Known Special-Status Wildlife	
					Occurrences (by 1995)		Occurrences (by 1995)	
					# species	# occurrences	# species	# occurrences
Bacon Island	2028	260.5	0.0	6.8	1	1	1	1
Bethel Island	-	326.7	2.4	90.7			1	1
Bishop Tract	2042	70.2	6.7	1.1			1	1
Boggs (Moss Tract)	404	158.2	3.4	61.9				
Bouldin Island	756	144.2	0.0	5.3				
Brack Tract	2033	106.3	8.3	0.0	1	2	2	8
Bradford Island	2059	121.9	0.0	14.8				
Brannan/Andrus Island	-	-	-	-	3	6	2	2
Andrus	317	67.5	6.2	2.2	-	-	-	-
Andrus, Isleton	407	44.2	23.9	0.0	-	-	-	-
Andrus, Upper	556	8.6	0.0	0.0	-	-	-	-
Brannan	2067	124.9	21.6	5.7	-	-	-	-
Byron Tract	800	836.5	54.7	0.3	6	7	1	3
Canal Ranch	2086	132.1	18.5	0.0			2	6
Coney Island	2117	35.4	1.8	1.4				
Dead Horse Island	2111	10.1	0.0	0.0				
Empire Tract	2029	106.2	18.2	14.6				
Fabian Tract	773	124.4	10.9	10.0				
Fay	2113	18.4	0.0	2.7				
Glanville Tract	1002	239.0	55.7	11.3				
Grand Island	3	256.7	37.3	13.2	2	3	1	1
Hastings Tract	2060	266.8	80.3	0.0				
Holland Tract	2025	310.9	15.7	31.0			1	1
Holt Station	2116	2.2	0.8	0.0				
Hotchkiss Tract	799	723.5	4.3	44.5				
Jersey Island	830	574.6	16.3	51.6				
Jones Tract	-	-	-	-	-	-	-	-
Jones, Lower	2038	95.6	0.0	1.1			1	1
Jones, Upper	2039	312.7	2.4	0.0				
King Island	2044	51.2	0.0	0.0				
Little Mandeville	2118	33.4	0.0	5.8				
Mandeville Island	2027	291.3	85.6	13.7				
McCormack Williamson Tr	2110	34.1	0.0	6.6				
McDonald Island	2030	223.1	76.8	10.9				
Medford Island	2041	67.9	2.3	16.2			1	1
Merritt Island	150	117.1	0.0	0.0				
Mildred Island	2021	100.2	0.0	0.0				
Naglee Burke	1007	0.0	0.0	0.0				
New Hope Tract	348	236.1	52.9	4.2			1	1
Orwood Island	2024	158.7	0.0	3.3				
Palm Tract	2036	148.9	0.0	0.0				
Pescadero	2058	164.6	8.7	6.4			2	4
Pierson District	551	124.6	25.8	3.6				
Prospect Island	1667	368.4	2.6	0.2	1	1		
Quimby Island	2090	120.6	0.0	13.6				
Rindge Tract	2037	232.8	0.0	0.5				
Rio Blanco Tract	2114	76.7	16.6	4.7				
Roberts Island	-	-	-	-			2	6
Roberts, Lower	684	173.5	21.4	4.7	-	-	-	-
Roberts, Middle	524	99.6	8.8	1.3	-	-	-	-
Roberts, Upper	544	47.8	0.7	4.2	-	-	-	-
Rough and Ready Island	-	201.2	80.7	113.0				
Ryer Island	501	66.7	4.5	0.4				
Sargent Barnhart Tract	2074	19.4	1.2	8.3				
Sherman Island	341	167.4	0.0	2.0			2	2
Shima Tract	2115	64.7	0.0	0.0				
Shin Kee Tract	-	3.7	0.1	0.0	1	1		
Smith	1614	12.1	0.0	1.9				
Stark	2089	47.7	8.3	0.4				
Staten Island	38	138.5	0.0	0.9	2	2	1	6
Stewart Tract	2062	105.9	2.6	3.6	2	2	2	2
Sutter Island	349	104.7	0.0	0.0				
Terminus	548	517.3	174.9	4.4			1	1
Twitchell	1601	141.6	0.0	4.5				
Tyler Island	563	50.7	9.9	0.5			1	1
Walnut Grove	554	11.9	0.0	0.0	-	-	-	-
Union Island	1,2	398.2	7.0	42.8	2	2	3	5
Van Sickle Island	1607	0.0	0.0	0.0				
Veale Tract	2065	125.6	4.4	0.0				
Venice Island	2023	216.0	3.2	66.5				
Victoria Island	2040	140.6	0.0	0.0				
Webb Tract	2026	337.9	78.7	84.3				
Weber	828	0.0	0.0	3.9				
Winter Island	2122	n/d	n/d	n/d				
Woodward Island	2072	79.8	0.0	0.0				
Wright-Elmwood Tract	2119	67.4	0.0	7.5				
-	307	153.5	10.9	1.2				
-	369	63.6	15.6	18.3				
-	536	1154.5	78.9	0.0				
-	765	85.4	4.8	0.0				
-	813	57.3	9.1	0.0				
-	900	531.2	66.5	17.6				
-	999	420.2	28.4	18.6				
-	1608	0.0	0.0	0.0				
-	2084	161.6	1.1	5.7				
-	2093	140.3	21.9	2.8				
-	2095	191.5	60.3	63.2				
-	2098	1229.0	844.8	0.0				
-	2121	10.2	43.7	0.0				

ISLAND	Reclamation District	Exterior to Levee						
		Native Vegetation (Acres)	Wetlands (Acres)	Riparian Habitats (Acres)	Known Special-Status Plant		Known Special-Status Wildlife	
					Occurrences (by 1995)		Occurrences (by 1995)	
					# species	# occurrences	# species	# occurrences
Bacon Island	2028	99.7	0.0	0.4	4	47	2	8
Bethel Island	-	18.0	0.0	0.2	4	19		
Bishop Tract	2042	32.9	0.9	0.5	1	1		
Boggs (Moss Tract)	404	35.3	0.0	0.7				
Bouldin Island	756	73.2	0.3	0.0	5	46	4	5
Brack Tract	2033	89.6	0.0	0.0	2	5	2	7
Bradford Island	2059	49.2	0.0	0.0	2	5		
Brannan/Andrus Island	-	-	-	-	6	40	3	5
Andrus	317	68.5	1.5	3.3	-	-	-	-
Andrus, Isleton	407	94.5	0.2	0.0	-	-	-	-
Andrus, Upper	556	148.5	0.0	1.7	-	-	-	-
Brannan	2067	350.6	10.0	2067	-	-	-	-
Byron Tract	800	37.8	0.2	0.3	3	10	1	2
Canal Ranch	2086	47.3	0.0	0.0	4	9	1	2
Coney Island	2117	49.0	0.7	0.2	2	8	1	3
Dead Horse Island	2111	18.7	0.0	0.0	1	5	1	1
Empire Tract	2029	70.4	0.0	0.1	4	15	2	2
Fabian Tract	773	215.1	2.1	28.6	2	9	3	10
Fay	2113	13.1	0.0	0.0	2	5	1	1
Glanville Tract	1002	59.5	45.3	28.3	4	9	3	3
Grand Island	3	410.0	0.0	15.6			1	1
Hastings Tract	2060	118.2	1.9	0.0	2	3		
Holland Tract	2025	73.1	0.1	0.0	4	39	1	1
Holt Station	2116	0.7	0.2	0.0				
Hotchkiss Tract	799	23.1	0.4	0.0	2	11	2	2
Jersey Island	830	122.9	0.5	6.6				
Jones Tract	-	-	-	-	-	-	-	-
Jones, Lower	2038	72.0	0.0	0.0	4	14	1	2
Jones, Upper	2039	93.3	31.4	0.0	4	15	3	4
King Island	2044	63.8	0.0	0.0				
Little Mandeville	2118	17.0	0.0	1.8				
Mandeville Island	2027	44.8	0.1	28.2	3	20	1	1
McCormack Williamson Tr	2110	32.6	0.0	1.9	4	18	1	5
McDonald Island	2030	172.1	0.0	3.3	4	16	2	2
Medford Island	2041	16.8	0.9	1.1	2	4	2	2
Merritt Island	150	121.4	0.0	1.0			1	2
Mildred Island	2021	51.7	0.0	0.0	1	1		
Naglee Burke	1007	0.0	0.0	0.0			1	1
New Hope Tract	348	66.9	1.6	0.5	1	12	4	16
Orwood Island	2024	53.6	0.0	1.3	2	4		
Palm Tract	2036	56.7	0.6	0.0	3	17	2	5
Pescadero	2058	140.3	1.8	17.8			1	2
Pierson District	551	153.0	38.6	21.1	2	6	3	5
Prospect Island	1667	50.0	0.7	3.2	2	2		
Quimby Island	2090	18.8	0.0	0.6	4	7		
Rindge Tract	2037	114.6	0.0	0.1	3	26	1	1
Rio Blanco Tract	2114	17.8	0.5	9.7			1	1
Roberts Island	-	-	-	-	3	9	4	17
Roberts, Lower	684	130.2	5.3	5.2	-	-	-	-
Roberts, Middle	524	77.7	0.1	23.5	-	-	-	-
Roberts, Upper	544	159.3	9.2	3.2	-	-	-	-
Rough and Ready Island	-	32.7	3.9	5.7	1	2		
Ryer Island	501	251.1	1.5	11.9				
Sargent Barnhart Tract	2074	22.2	3.1	0.9	1	1		
Sherman Island	341	214.5	40.6	0.4	5	65	3	4
Shima Tract	2115	38.4	0.0	0.0	2	3	1	2
Shin Kee Tract	-	23.0	0.1	0.0			2	2
Smith	1614	12.2	0.0	36.3				
Stark	2089	38.2	1.1	6.4	1	2	2	4
Staten Island	38	111.7	0.0	1.5	7	24	3	5
Stewart Tract	2062	127.9	40.4	13.6				
Sutter Island	349	118.8	0.0	0.0				
Terminous	548	130.7	6.6	0.0	5	19	4	7
Twitchell	1601	95.1	0.0	0.0	4	5		
Tyler Island	563	353.0	0.3	0.9	3	4	2	4
Walnut Grove	554	11.9	0.0	0.0	-	-	-	-
Union Island	1,2	246.8	1.9	3.9	4	27	2	6
Van Sickle Island	1607	0.0	0.0	0.0	4	14	1	1
Veale Tract	2065	35.5	0.8	0.0				
Venice Island	2023	49.0	0.0	0.3	3	7	1	1
Victoria Island	2040	125.0	1.7	0.0	4	34	1	3
Webb Tract	2026	62.7	0.0	8.6	5	33		
Weber	828	0.0	0.0	0.0				
Winter Island	2122	n/d	n/d	n/d				
Woodward Island	2072	63.2	0.1	0.0	2	22	3	4
Wright-Elmwood Tract	2119	55.6	0.1	0.1	1	1		
-	307	46.2	0.0	4.8				
-	369	10.3	141.2	121.2				
-	536	24.9	0.0	0.3				
-	765	10.8	0.0	11.2				
-	813	33.6	0.2	1.7				
-	900	156.5	4.2	4.2				
-	999	432.3	5.1	4.7				
-	1608	0.0	0.1	0.0				
-	2084	43.8	0.0	0.1				
-	2093	100.5	17.7	9.7				
-	2095	37.4	9.4	11.7				
-	2098	36.8	12.2	5.8				
-	2121	0.1	1.8	0.4				
		432.2915	141.1941	121.199				

Known Special-Status Plant Occurrences Interior to Levee Systems (by 1995)																		
	Mason's	Delta Tule	California	Elderberry	Suisun	Delta					Antioch							
	Lilaeopsis	Pea	Hibiscus	Bush	Marsh	Button	Caper Fruited	Recurved	Delta	Sanford's	Evening	Carquinez		San Joaquin	Soft Bird's	Slough	Marsh	
ISLAND	Lilaeopsis	Pea	Hibiscus	Bush	Aster	Celery	Tropidocarpum	Larkspur	Mudwort	Arrowhead	Primrose	Goldenbush	Brittlescale	Saltbush	Beak	Thistle	Skullcap	
Bacon Island			1															
Bethel Island																		
Bishop Tract																		
Bouldin Island																		
Brack Tract			2															
Bradford Island																		
Brannan Island	2				2						2							
Byron Tract			1				2	1				1	1	1				
Canal Ranch																		
Coney Island																		
Dead Horse Island																		
Decker Island																		
Empire Tract																		
Fabian Tract																		
Fay																		
Glanville Tract																		
Grand Island	2	1																
Hastings Tract																		
Holland Tract																		
Hotchkiss Tract																		
Jersey Island																		
Jones, Lower																		
Jones, Upper																		
King Island																		
Mandeville Island																		
McCormack Williamson Tract																		
McDonald Island																		
Medford Island																		
Merritt Island																		
Mildred Island																		
Naglee Burke																		
New Hope Tract																		
Orwood Island																		
Palm Tract																		
Pescadero																		
Pierson District																		
Prospect Island		1																
Quimby Island																		
Rindge Tract																		
Rio Blanco Tract																		
Roberts Island																		
Rough and Ready Island																		
Ryer Island																		
Sargent Barnhart Tract																		
Sherman Island																		
Shima Tract																		
Shin Kee Tract			1															
Stark																		
Staten Island		1	1															
Stewart Tract						1										1		
Sutter Island																		
Terminous																		
Twitchell																		
Tyler Island																		
Union Island			1	1														
Van Sickle Island																		
Veale Tract																		
Venice Island																		
Victoria Island																		
Webb Tract																		
Woodward Island																		
Wright-Elmwood Tract																		

Known Special-Status Wildlife Occurrences Interior to Levee Systems (by 1995)																		
		Giant	Western		San Joaquin	California	Greater	Valley		Lange's				Salt Marsh	Sacramento		Antioch	
	Swainson's	Garter	Pond	Burrowing	Pocket	Black	Sandhill	Elderberry	San Joaquin	Metalmark	Tri-colored	Great Blue	Harvest	Anthicid	California	Anthicid	White-	Double
ISLAND	Hawk	Snake	Turtle	Owl	Mouse	Rail	Crane	Beetle	Kit Fox	Butterfly	Blackbird	Heron	Mouse	Beetle	Least Tern	Beetle	Kite	Cormorant
Bacon Island				1														
Bethel Island				1														
Bishop Tract	1																	
Bouldin Island																		
Brack Tract				1			7											
Bradford Island																		
Brannan Island	1													1				
Byron Tract				3														
Canal Ranch	1						5											
Coney Island																		
Dead Horse Island																		
Decker Island																		
Empire Tract																		
Fabian Tract																		
Fay																		
Glanville Tract																		
Grand Island	1																	
Hastings Tract											1							
Holland Tract																		
Hotchkiss Tract																		
Jersey Island																		
Jones, Lower				1														
Jones, Upper																		
King Island																		
Mandeville Island																		
McCormack Williamson Tract																		
McDonald Island																		
Medford Island	1																	
Merritt Island																		
Mildred Island																		
Naglee Burke																		
New Hope Tract	1																	
Orwood Island																		
Palm Tract																		
Pescadero	3										1							
Pierson District																		
Prospect Island																		
Quimby Island																		
Rindge Tract																		
Rio Blanco Tract																		
Roberts Island	5			1														
Rough and Ready Island																		
Ryer Island																		
Sargent Barnhart Tract																		
Sherman Island							1											1
Shima Tract																		
Shin Kee Tract																		
Stark																		
Staten Island							6											
Stewart Tract	1										1							
Sutter Island																		
Terminus		1																
Twitchell																		
Tyler Island							1											
Union Island	g 3				1			1										
Van Sickle Island																		
Veale Tract																		
Venice Island																		
Victoria Island																		
Webb Tract																		
Woodward Island																		
Wright-Elmwood Tract																		

		Known Special-Status Plant Occurrences Exterior to Levee Systems (by 1995)																			
	</																				

ISLAND	Known Special-Status Wildlife Occurrences Exterior to the Levee Systems (by 1995)																			
	Swainson's Hawk		Giant Garter Snake		Western Pond Turtle		Burrowing Owl		San Joaquin Pocket Mouse		California Black Rail		Greater Sandhill Crane		Valley Elderberry		San Joaquin Kit Fox		Lange's Metalmark Butterfly	
	Hawk		Snake		Turtle		Owl		Mouse		Rail		Crane		Beetle		Fox		Butterfly	
Bacon Island					2						6									
Bethel Island																				
Bishop Tract																				
Bouldin Island					1		1				2		1							
Brack Tract		1											6							
Bradford Island																				
Brannan Island		2				2														
Byron Tract													2							
Canal Ranch																				
Coney Island		3													1					
Dead Horse Island																				
Decker Island																				
Empire Tract							1				1									
Fabian Tract		8	1	1	1						1									
Fay											1									
Glanville Tract		1					1								1					
Grand Island		1																		
Hastings Tract																				
Holland Tract											1						1			
Hotchkiss Tract							1													
Jersey Island																				
Jones, Lower											2									
Jones, Upper						1					2									
King Island																				
Mandeville Island											1									
McComack Williamson Tract															5					
McDonald Island											1				1					
Medford Island											1				1					
Merritt Island		2																		
Milfred Island																				
Naglee Burke							1													
New Hope Tract		9	1								1				5					
Orwood Island																				
Palm Tract					1						4									
Pescadero		2																		
Pierson District		3	1																	1
Prospect Island																				
Quimby Island																				
Rindge Tract															1					
Rio Blanco Tract							1													
Roberts Island		8					1								5			3		
Rough and Ready Island																				
Ryer Island																				
Sargent Barnhart Tract																				
Sherman Island			1													2				
Shima Tract		2																		
Shin Kee Tract			1								1									
Stark		2			2															
Staten Island						2							2		1					
Stewart Tract																				
Sutter Island																				
Terminus			2				1				3		1							
Twitchell																				
Tyler Island		2													2					
Union Island		4	2																	
Van Sickle Island					1															
Veale Tract																				
Verice Island																				
Victoria Island						3														
Webb Tract																				
Woodward Island					1						2									
Wright-Elmwood Tract																				

		Known Special-Status Plant Occurrences (by 1995)																				

Known Special-Status Wildlife Occurrences (by 1995)																				
ISLAND		Hawk	Snake	Turtle	Owl	Mouse	Rail	Crane	Beetle	Kit Fox	Butterfly	Blackbird	Heron	Beetle	Least Tern	Beetle	Antioch	White-tailed	Crested	Comorant
Swainson's	Garter	Pond	Burrowing	San Joaquin	California	Greater	Sandhill	Longhorn	San Joaquin	Metamorph	Lance's	Tri-colored	Great Blue	Anthicid	California	Anthicid	Sacramento	Dunes	White-tailed	Double
Bacon Island			2	1		6														
Bethel Island			1																	
Bishop Tract		1																		
Bouldin Island		1	1		2		1													
Brack Tract		1	1				13													
Bradford Island																				
Brannan Island		3												3		1				
Byron Tract		1	2		3			7												
Canal Ranch		3																		
Dead Horse Island								1												
Decker Island																				
Empire Tract			1		1															
Fabian Tract		8	1	1																
Fay							1													
Glanville Tract		1						1												
Grand Island		2																		
Hastings Tract																				
Holland Tract							1					1								
Hotchkiss Tract				1					1											
Jersey Island																				
Jones, Lower				1			2													
Jones, Upper			1				2							1						
King Island																				
Mandeville Island																				
McComack Williamson Tract							1													
McDonald Island							1													
Medford Island		1					1													
Merritt Island		2																		
Mildred Island																				
Naglee Burke				1																
New Hope Tract		10					1													
Orwood Island																				
Palm Tract			1				4													
Pescadero		5												1						
Pierson District		3		1															1	
Prospect Island																				
Quimby Island																				
Rindge Tract									1											
Rio Blanco Tract			1																	
Roberts Island	f	13							5					3						
Rough and Ready Island																				
Ryer Island																				
Sargent Barnhart Tract																				
Sherman Island			1					1			2					1				1
Shima Tract		2																		
Shin Kee Tract			1				1													
Stark		2																		
Staten Island			2						8	1										
Stewart Tract		1										1								
Sutter Island																				
Terminus			3						1											
Twitchell																				
Tyler Island		2							1											
Union Island	g	7	2																	
Van Sickle Island				1																
Veale Tract																				
Venice Island																				
Victoria Island			3																	
Webb Tract																				
Woodward Island																				
Wright-Elmwood Tract																				

USGS 1

	Reclamation	
ISLAND	District	USGS Quad
Bacon Island	2028	Bouldin Island, Woodward Island
Bethel Island	-	Bouldin Island, Jersey Island
Bishop Tract	2042	Terminous
Boggs (Moss Tract)	404	Stockton West
Bouldin Island	756	Bouldin Island, Isleton, Terminous
Brack Tract	2033	Thornton
Bradford Island	2059	Jersey Island
Brannan/Andrus Island	-	
Andrus	317	Bouldin Island, Isleton
Andrus, Isleton	407	Isleton
Andrus, Upper	556	Isleton
Brannan	2067	Rio Vista, Jersey Island
Byron Tract	800	Clifton Court Forebay, Woodward Island
Canal Ranch	2086	Thornton
Coney Island	2117	Clifton Court Forebay
Dead Horse Island	2111	Thornton
Empire Tract	2029	Terminous
Fabian Tract	773	Clifton Court Forebay, Union Island
Fay	2113	Woodward Island
Glanville Tract	1002	Bruceville
Grand Island	3	Rio Vista, Courtland, Isleton
Hastings Tract	2060	Dozier, Liberty Island
Holland Tract	2025	Bouldin Island, Woodward Island
Holt Station	2116	Holt
Hotchkiss Tract	799	Jersey Island
Jersey Island	830	Jersey Island
Jones Tract	-	
Jones, Lower	2038	Woodward Island, Holt
Jones, Upper	2039	Woodward Island, Holt
King Island	2044	Terminous
Little Mandeville	2118	Bouldin Island
Mandeville Island	2027	Bouldin Island
McCormack Williamson Tr	2110	Bruceville
McDonald Island	2030	Bouldin Island, Woodward Island, Holt, Terminous
Medford Island	2041	Bouldin Island
Merritt Island	150	Clarksburg, Courtland
Mildred Island	2021	Woodward Island
Naglee Burke	1007	Union Island
New Hope Tract	348	Bruceville, Thornton
Orwood Island	2024	Woodward Island
Palm Tract	2036	Woodward Island
Pescadero	2058	Lathrop, Union Island
Pierson District	551	Courtland
Prospect Island	1667	Rio Vista, Liberty Island
Quimby Island	2090	Bouldin Island
Rindge Tract	2037	Holt, Terminous

USGS 2

	Reclamation	
ISLAND	District	USGS Quad
Rio Blanco Tract	2114	Terminous
Roberts Island	-	
Roberts, Lower	684	Holt
Roberts, Middle	524	Stockton West, Holt
Roberts, Upper	544	Lathrop, Union Island, Holt
Rough and Ready Island	-	Stockton West
Ryer Island	501	Rio Vista, Liberty Island, Courtland, Isleton
Sargent Barnhart Tract	2074	Stockton West
Sherman Island	341	Antioch North, Jersey Island
Shima Tract	2115	Lodi South, Terminous
Shin Kee Tract	-	Terminous
Smith	1614	Stockton West
Stark	2089	Union Island
Staten Island	38	Bouldin Island, Isleton, Thornton
Stewart Tract	2062	Stewart, Union Island
Sutter Island	349	Courtland
Terminous	548	Thornton, Terminous
Twitchell	1601	Jersey Island
Tyler Island	563	Isleton
Union Island	1, 2	Clifton Court Forebay, Woodward Island, Union Island, Holt
Van Sickle Island	1607	Honker Bay
Veale Tract	2065	Woodward Island
Venice Island	2023	Bouldin Island
Victoria Island	2040	Clifton Court Forebay, Woodward Island, Holt
Walnut Grove	554	Thornton, Isleton
Webb Tract	2026	Bouldin Island, Jersey Island
Weber	828	Stockton West
Winter Island	2122	Antioch North
Woodward Island	2072	Woodward Island
Wright-Elmwood Tract	2119	Stockton West, Lodi South, Holt, Terminous
-	307	Clarksburg
-	369	Thornton, Courtland
-	536	Rio Vista
-	765	Clarksburg
-	813	Courtland
-	900	Sacramento West
-	999	Clarksburg, Liberty Island, Courtland
-	1608	Lodi South, Stockton West
-	2084	Rio Vista
-	2093	Liberty Island
-	2095	Vernalis, Lathrop
-	2098	Liberty Island
-	2121	Woodward Island